

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-44. (Canceled)

1 **45. (Currently Amended) [[An]] A dairy source enriched in $\alpha(2-3)$**
2 **sialyllactose ~~formed in a dairy source~~ selected from the group consisting of milk, colostrum and**
3 **a cheese processing mixture, wherein said dairy source is formed by the process comprising:**
4 a) contacting a catalytic amount of at least one $\alpha(2-3)$ trans-sialidase with the
5 dairy source, wherein the dairy source comprises lactose and sialic acid donors to form a dairy
6 source/trans-sialidase mixture; and
7 b) incubating said dairy source/trans-sialidase mixture under conditions suitable
8 to effect the $\alpha(2-3)$ trans-sialidase-catalyzed transfer of sialic acid from the sialic acid donors to
9 the lactose;
10 thereby forming said dairy enriched in $\alpha(2-3)$ sialyllactose ~~in said dairy source~~.

1 **46. (Currently Amended) [[An]] A dairy source enriched in $\alpha(2-3)$**
2 **sialyllactose, wherein said dairy source comprises ~~formed in a~~ cheese processing waste stream**
3 **and is formed by the process comprising:**
4 a) contacting a catalytic amount of at least one $\alpha(2-3)$ trans-sialidase with the
5 cheese processing waste stream, wherein the cheese processing waste stream comprises lactose
6 and sialic acid donors to form a cheese processing waste stream/trans-sialidase mixture; and
7 b) incubating said cheese processing waste stream/trans-sialidase mixture under
8 conditions suitable to effect the $\alpha(2-3)$ trans-sialidase-catalyzed transfer of sialic acid from the
9 sialic acid donors to the lactose;
10 thereby forming said dairy source enriched in $\alpha(2-3)$ sialyllactose ~~in said cheese~~
11 ~~processing waste stream~~.

1 **47. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim **45** or **46**, wherein said $\alpha(2-3)$ trans-sialidase is a Kinetoplastid trans-sialidase.

1 **48. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim **45** or **46**, wherein said $\alpha(2-3)$ trans-sialidase is encoded by a gene isolated from a species
3 of the genera selected from the group consisting of Trypanosoma, Endotrypanum and
4 Pneumocystis.

1 **49. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim **45** or **46**, wherein the $\alpha(2-3)$ trans-sialidase is recombinantly produced.

1 **50. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim **45**, wherein the dairy source/trans-sialidase mixture is incubated for at least 1 hour.

1 **51. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim **46**, wherein the cheese processing waste stream/trans-sialidase mixture is incubated for at
3 least 1 hour.

1 **52. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim **45**, wherein the dairy source/trans-sialidase mixture is incubated at a temperature of about
3 5° C. to about 45° C.

1 **53. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim **46**, wherein the cheese processing waste stream/trans-sialidase mixture is incubated at a
3 temperature of about 5° C. to about 40° C.

1 **54. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim **45**, wherein the dairy source/trans-sialidase mixture has a pH of about 6 to about 8.

1 **55. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim **46**, wherein the cheese processing waste stream/trans-sialidase mixture has a pH of about 5
3 to about 8.

1 **56. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim 46, wherein the cheese processing waste stream comprises a member selected from the
3 group consisting of whole whey, demineralized whey permeate, the regeneration stream from
4 demineralized whey permeate, whey permeate, whey powder and lactose.

1 **57. – 69. (Canceled)**

1 **70. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim 46, wherein said cheese processing waste stream is the mother liquor obtained by
3 crystallizing lactose from whey.

1 **71. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim 45 or 46, wherein exogenous $\alpha(2-3)$ sialyloligosaccharides are added during said
3 incubating step.

1 **72. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim 45, further comprising the step of processing the dairy source/trans-sialidase mixture for
3 cheesemaking before the recovery step.

1 **73. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim 56, wherein the lactose is crystallized lactose, spray dried lactose, or edible lactose.

1 **74. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim 45 or 46, wherein the sialic acid donors are $\alpha(2-3)$ sialosides.

1 **75. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim 74, wherein the $\alpha(2-3)$ sialosides are selected from the group consisting of κ casein,
3 gangliosides and mixtures thereof.

1 **76. (Currently Amended)** The dairy source enriched in $\alpha(2-3)$ sialyllactose of
2 claim 45 or 46, wherein the sialic acid donors are sialyl- $\alpha(2-3)$ - β -galactosides.